

Economic and Fiscal Impact of the 2004 Democratic National Convention in Boston

**A Report to
Mayor Thomas M. Menino**

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Introduction

Boston's first-ever political convention, the Democratic National Convention of 2004, is expected to deliver a sizeable economic and fiscal benefit to the Commonwealth of Massachusetts, the five-county metropolitan area, and the City of Boston. The Convention runs between July 26 and July 29, 2004 and is expected to draw more than 35,000 delegates, media and staff along with many political fans and protestors to the City and the surrounding metropolitan area.

The Convention will take place at the FleetCenter, home of the Boston Bruins professional hockey team and the Boston Celtics professional Basketball team. The FleetCenter is capable of seating some 22,000 people, has several restaurants, many luxury boxes, and is convenient to all forms of transportation and lodging. Hotels in downtown Boston, Cambridge, and other reasonably close cities or towns have offered room blocks to delegates to ensure their close proximity to the FleetCenter. Other guests will stay in hotels throughout Boston, Cambridge and the metropolitan area.

This paper attempts to quantify the economic impact, that is, the value-added to Gross Regional Product (GRP) or the dollar value of additional goods and services produced in the region, of such a large convention on the five-county metropolitan area that includes Suffolk, Norfolk, Middlesex, Essex and Plymouth counties¹ and fiscal (tax) impact on the Commonwealth of Massachusetts and the City of Boston.

The researchers have employed the use of a "dynamic input-output" model designed to follow direct spending dollars due to activity related to an event like the Democratic National Convention. As those dollars are spent over and over again, through the economy of a given geographic area and among the many different industries affected by this activity, the model estimates the value of any additional production of goods and services that occur in the region as a result. The total of direct spending is then

¹ See Appendix A for a listing of the cities and towns in those counties.

subtracted from the total of additional Gross Regional Product generated, yielding a “value-added multiplier”.

For example, imagine that you buy a carton of orange juice from the supermarket. The money from the sale of that orange juice is immediately transformed into wages for store employees and profit for the storeowners, wages and profit for the wholesaler and distribution company, and wages and profit for the producer of the orange juice. This is the effect of “direct” spending on goods and services. In this study, whatever portion of the value of that orange juice transaction can be attributed to the region is added to Gross Regional Product. And, when those employees and business-owners then spend those wages and profits earned, generating additional production of goods and services and value-added (some of which can be attributed to the region), there is a secondary benefit to the economy, and so on, and so on. This is the “multiplier” effect.

This paper seeks to accurately measure the indirect, or multiplier-induced, value of additional goods and services produced and state the added Gross Regional Product resulting from direct spending due to the 2004 Democratic National Convention on the five-county metropolitan area economy.

Many similar studies done for other conventions simply attached a multiplier of “2” to the estimated direct spending and ended the study. A multiplier of 2 means that for every dollar in direct spending, another dollar of indirect spending occurs. Most researchers agree that for a larger geographic area, and for sustained spending over a long period of time, a multiplier of 2 is accurate. However, for a short duration event in a highly mobile region such as New England, a multiplier of 2 may not be realistic.

This paper will also attempt to qualify the major state and local taxes that will be affected and then quantify additional collections from those taxes. There will be additional discussion of the ratio of expected State to City of Boston additional tax collections resulting from Convention activity.

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The Participants, the Mayor and the People of Boston, wish to thank Professors Havens and Clayton-Matthews for donating their time and considerable experience to this project. Each gave willingly to this effort free of charge in order to aid the City of Boston in achieving the most accurate reflection of an economic and fiscal impact as could be done with the resources available.

Executive Summary

Boston's first-ever political convention, the Democratic National Convention of 2004, is expected to deliver a sizeable economic benefit to the Commonwealth of Massachusetts and the five-county metropolitan area that includes Suffolk, Norfolk, Middlesex, Essex and Plymouth counties. The Convention runs between July 26 and July 29, 2004 and is expected to draw more than 35,000 delegates, media and staff along with many political fans and protestors to the City of Boston and the surrounding metropolitan area.

The direct spending impact to the metropolitan area economy of guest spending and Boston 2004 Host Committee² spending is estimated to total \$126.1 million. The indirect value-added arising from direct Convention related spending is estimated to total \$28.1 million or approximately an additional \$0.22 of value-added for every dollar of direct spending. In total, direct spending and indirect value-added are expected to add \$154.2 million to the metropolitan area economy.

Direct spending in Suffolk County is estimated to reach \$104.7 million and in the remaining four counties, \$21.4 million, producing additional Gross Regional Product of \$82.2 million and \$71.9 million. Gross Regional Product in Suffolk County that is less than direct spending can be explained by a large portion of direct spending entering the economy of Suffolk County in the form of wages, and then, through a high non-resident labor pool in the county, the removal of those wages from the economy where people work and spending them in the economy closer to their homes, reducing value-added in Suffolk County and increasing it in the remaining four counties. This effect can also be seen in a discussion of personal income that occurs later in this paper

² Based on Boston 2004 Host Committee Agreement with DNCC (Exhibit A – Boston Budget Summary), large portions of this budget will not be spent by the committee itself, but through intermediaries. For example, security spending will be directed by the City of Boston to various state and local police agencies to ensure comprehensive police coverage throughout the event's timeframe and across its geography.

Both direct spending and indirect value-added are expected to produce tax revenue for the Commonwealth of Massachusetts and local governments in the metropolitan area. The Commonwealth and the City of Boston are the two largest expected beneficiaries of additional tax revenue from Convention related spending, taking in an additional \$10.7 million and \$2.0 million, respectively. Overall it is estimated that the Commonwealth will receive additional convention related tax revenues on the order of 5.5 times what the City of Boston can expect from the same event.

The Commonwealth will benefit from increased income, sales and excise taxes along with licensing and other fees from within the metropolitan area. This estimate is likely conservative as the rest of the state and region were not included in this analysis and some Convention direct and indirect spending is likely to leave the area of study. The City of Boston will benefit from increased excise taxes, fines, and fees for licenses and permits.

All guest spending and tax collection estimates from hotel excise reflect capacity limitations of hotels in all markets, the price increases that will occur due to bidding on remaining hotel rooms, added supply from new hotels and expansions in Boston that are expected to be finished by July, and negotiated reduced hotel room rates due to advanced block booking of rooms for delegates through the Democratic National Convention Committee (DNCC). Furthermore, the estimate reflects the net value over a normal July week of hotel business, which is usually strong for Boston-area hotels.

Suburban hotels and therefore, the cities and towns where they are located and the Commonwealth overall, will benefit substantially from both increased room occupancy and average daily room rates increasing tax revenue during the Convention, as they accommodate guests who could not or chose not to stay in Boston. While Boston on the other hand, will see limited tax revenue increases due to more displaced normal business than other areas.

Metropolitan Area Economic Impact

Direct spending by Convention guests is expected to reach \$61.6 million in total, mostly in the hospitality, retail and transportation industries. \$30.0 million will be spent on meals and beverages, retail sales, entertainment and personal services, \$27.3 million on hotel rooms and hospitality suites, and \$4.3 million on transportation related services. Spending in each of these categories was distributed between Suffolk County (\$40.2 million) and the remaining four counties in the metropolitan area (\$21.4 million).

In addition to direct spending by guests at the Convention, Boston 2004 Host Committee direct spending (through intermediaries) is expected to amount to \$64.5 million across 7 major industry groups and 17 private industries. The largest industry group, Local Government, which includes only security and will technically be spent by the City of Boston and distributed among various state and local police agencies, will be \$25.0 million, followed by Services with \$11.8 million, Construction with \$9.2 million, Finance Insurance & Real Estate with \$7.2 million, Transportation, Communication & Utilities with \$7.1 million, Retail with \$3.8 million, and Manufacturing with \$0.4 million. All of Host Committee spending is assumed to take place within Suffolk County.

As mentioned above, in addition to direct spending by guests of the Convention and the Host Committee, there is the economic benefit of indirect value-added. This is the difference between total direct spending and the additional Gross Regional Product produced as a result of that spending. The model and inputs used for this study do not use a multiplier per se, but suggest additional value-added of 1.223 for the metropolitan economy as a whole. This means that for every dollar in direct spending of \$126.1 million by guests and the Host Committee, there will be an additional \$0.22 of value-added, or \$28.1 million in total additional indirect value-added to the metropolitan area economy as Convention related spending cycles through it again and again.

Suffolk County alone will benefit from an initial direct spending impact of \$104.7 million, but will capture only \$82.2 million direct spending impact due to “leakage” of value-added caused in the majority by the wages of non-resident workers leaving the county and being re-spent elsewhere. The remaining four counties of the metropolitan area economy will benefit substantially from \$21.4 million in direct spending and a subsequent \$50.6 million of indirect value-added that includes leakage from Suffolk County. There is additional discussion of “leakage” further in this paper.

Metropolitan Area Economic Impact

Detail of Metropolitan Economic Impact

	Total	Suffolk	Rest of Metro
Gross Regional Product (GRP)	\$ 154,155,120	\$ 82,211,080	\$ 71,944,040
Gross Personal Income	137,381,800	80,824,800	56,557,000
Wage and Salary Disbursements	107,680,000	63,420,000	44,260,000
Net Personal Income (w/ residence adjustment)	106,189,800	28,334,800	77,855,000
<u>Direct Metropolitan Spending Impact:</u>	<u>\$ 126,084,521</u>	<u>\$ 104,713,857</u>	<u>\$ 21,370,664</u>
Guest Spending	\$ 61,583,878	\$ 40,213,214	\$ 21,370,664
Host Committee Spending	\$ 64,500,643	\$ 64,500,643	\$ -
<u>Indirect Metropolitan Value-Added Impact:</u>	<u>\$ 28,070,599</u>	<u>\$ (22,502,777)</u>	<u>\$ 50,573,376</u>
"Multiplier" Value	1.223	0.785	3.366

Return on Investment

Multiplier Return on Total Spending	22.3%	-21.5%	236.6%
Boston 2004 Host Committee	139.0%	27.5%	NA

In sum, the Democratic National Convention of 2004 will give a \$154.2 million dollar boost to the metropolitan area economy through direct spending on goods and services and subsequent rounds of additional sales within the region.

*Fiscal (Tax) Impact: Massachusetts and Boston*³

The Commonwealth will benefit from increased revenue in Personal and Corporate Income taxes, Sales and Use taxes, Excise taxes and fees from licenses and permits. It is estimated here that the Commonwealth could expect to receive \$5.3 million in additional Personal Income taxes, \$1.1 million in Corporate Income and Business Excise taxes, \$906,000 in added Sales and Use taxes, and \$2.3 million in extra Excise taxes. The total of additional Convention related tax and fee revenue the Commonwealth could expect to receive is at least \$10.7 million. It is expected, although not quantified in this study, that the Commonwealth will receive additional tax revenue from spending “leakage” outside of the metropolitan area economy, but still within the state. The model in use only measures the five county-area and is not equipped to further analyze the additional impact in the remaining regions of the state, therefore that value cannot be presented here.

The City of Boston will benefit as well, but on a much smaller scale than the Commonwealth given the City’s limited avenues of taxation on the sale of goods and services and the wages of workers, where most Convention-activity driven spending will occur. The City should receive an additional \$845,000 in Excise Taxes and approximately \$1.1 million in fines and fees for license and permits. The City can expect limited additional excise tax revenues due to normally high July room occupancy rates to begin with. This will cause business to spill out to hotels in the suburban ring of the metropolitan area, increasing hotel excise revenues in surrounding cities and towns and for the Commonwealth, but limiting additional revenues to the City of Boston from what would normally be collected to a slight increase from added occupancy and increased room rates bid up by strong demand on a limited supply. This effect is explained in more detail later in this paper.

³ Boston additional tax, fine and fee revenues were calculated “outside” of model results. Commonwealth of Massachusetts tax revenues were calculated based on model outputs of personal income and consumption in the case of income and sales taxes, other excise taxes were taken directly from model output and tested with actual Massachusetts tax rates and against actual collections for reasonableness. See Appendix A for more detail.

Tax Impact

	Massachusetts	Boston	Metro	Total
<u>Personal Income Tax</u>	\$ 5,310,500	N/A	N/A	\$ 5,310,500
<u>Corporate & Business Excise Tax</u>	\$ 1,137,963	N/A	N/A	\$ 1,137,963
<u>Sales Tax</u>	\$ 905,872	N/A	N/A	\$ 905,872
Meals	\$ 721,434	N/A	N/A	\$ 721,434
<u>Excise Tax*</u>	\$ 2,265,311	\$ 844,898	\$ 617,326	\$ 3,727,535
Rooms	\$ 1,673,433	\$ 358,389	\$ 617,326	\$ 2,649,148
<u>Licenses, Permits, Fees & Other**</u>	\$ 1,068,630	\$ 1,114,354	N/A	\$ 2,182,984
<u>Total</u>	<u>\$ 10,688,275</u>	<u>\$ 1,959,252</u>	<u>\$ 617,326</u>	
	80.6%	14.8%	4.7%	
<u>Grand Total Tax Impact</u>				<u>\$ 13,264,853</u>
				100.0%
<u>Ratio of State to City Tax Impact</u>	<u>5.5</u>	<u>1.0</u>		

* Includes alcohol, motor vehicle fuel, and tobacco excises for the Commonwealth and Jet Fuel for the City of Boston

** Includes vehicle rental surcharge, sightseeing, motor vehicle licensing and unemployment insurance contributions for the Commonwealth and local vehicle rental surcharge for Boston

NOTE: Some revenue presented here is committed to special purposes for both the Commonwealth and the City of Boston and will not be available for appropriation.

Overall, the Commonwealth will receive 80% of the total estimated tax revenue generated from Convention direct and indirect spending. The City of Boston will receive 15% and surrounding cities and towns in the metropolitan area, about 5%. As is the case with most large events held in the City of Boston, nearly 85% of the tax revenue benefit goes to other governments of the Commonwealth.

The following pages detail the analysis done and define all inputs and data sources of this study.

Explanation of Results

To estimate the economic impact of the Convention on the metropolitan area economy, the researchers have utilized a “dynamic” or “input-output” model developed by Regional Economic Models, Inc. (REMI). REMI⁴ is an Amherst, Massachusetts-based company that has developed and sold economic modeling software since 1980. Several agencies of the Commonwealth of Massachusetts own and employ REMI models as well as many cities and the majority of states across the country. The REMI model is an economic forecasting and policy analysis model. In this study, estimated dollar values of direct spending were input by region (Suffolk County versus the remaining four counties in the metropolitan area) and associated with industries where such spending will likely take place. The model then estimates the effects of that direct industry spending on the output of all industries in a designated area and totals that output into numerous statistics including Gross Regional Product, Personal Income, Consumption and many others⁵.

Displaced Normal Activity (Opportunity Cost)

The economic and fiscal impact measurements have attempted to account for normal economic activity that will be displaced by convention business in industries that have strict capacity limitations, namely hotels, and especially in Boston. Put more simply, during this week in July, there will certainly be other Boston hotel guests that no longer are able to find a room in their desired location, or if they can, the price may be much higher than normal due to bidding on limited remaining available rooms. There can be argument over whether some business is gone forever, creating an “opportunity” cost, or if the business has just moved to other localities. We have reason to believe there is very little opportunity cost given that the event has been so well publicized that other travelers will simply utilize the excess capacity available in the surrounding metropolitan area hotels. The suburban market will, with normal occupancy rates, be able to absorb

⁴ See Appendix B for a detailed description of REMI from their website www.remi.com

⁵ See Appendix A for detailed REMI output variables and values.

nearly all of this displaced Boston business as they usually depend on spillover from the larger Boston market to begin with. This constitutes a “re-shuffling of the deck” rather than a true opportunity cost. Analysis of expected net hotel revenue during this week reveals that the increased hotel business (occupancy and average daily room rates above normal) almost fully offsets the loss expected from displaced normal business and additionally, total revenue of hotels will increase by 76% over what would be normal.

Direct Economic Impact

For the purpose of this analysis, direct spending has been divided between “Guest Spending” and “Host Committee Spending”. These two groups constitute all of direct spending for the Convention. Both are estimated, based on spending patterns of other conventions in the case of Guest Spending, or on a spending agreement, in the case of the Boston 2004 Host Committee. Specific assumption details are provided below.

Guest Spending

Guest spending includes delegates, media and staff attending events for the Convention. The number of people (35,000) expected to attend in total was estimated by the Boston 2004 Host Committee and the estimated number in each of the above mentioned groups was derived by weighted average from a study done for the 2000 Democratic National Convention held in Los Angeles.

Estimated Convention Guests by Group

Delegates/Family	8,933
Media	3,689
Technical Media	11,066
Staff/Other	11,312
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Total	35,000
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The number of projected Boston hotel rooms available (16,240) by the date of the convention (this number includes an estimate of small hotels and inns) was taken from a recently revised report on Boston's hotel industry prepared by the Boston Redevelopment Authority (BRA), and the number of suburban hotel rooms (26,998) from the "Outlook 2004" presentation of Boston/Cambridge and Suburban Boston hotel markets by Pinnacle Advisory Group.

The researchers have estimated hotel room rates to be paid by guests from projected future hotel market conditions⁶, accounted for the obvious geographical driven price differences between hotels in Boston/Cambridge and Suburban Boston (Suburban Boston rates average 57% of Boston/Cambridge average rates), and estimated price pressures resulting from strong convention-related demand. To measure this price pressure, an informal survey of two popular travel websites was done for 18 Suburban Boston and 11 Boston hotels. Only hotels that still had available rooms for the week of the Convention were surveyed. Average daily room rates for the week of the Convention were compared to average daily room rates for the week following. Suburban Boston room rates increased an average of 45.8% between the two periods and Boston/Cambridge room rates increased an average of 50.7%.

Guest's estimated average length of stay of 6.9 nights was derived from the Los Angeles 2000 study using a weighted average of the estimated length of stay for all the different groups of attendees found in that report. A person per-room factor of 1.6 was estimated by comparing Greater Boston Convention and Visitors Bureau (GBCVB) statistics of total annual visitors, lodging choices and actual hotel occupancy rates over the same period. Total guests of 35,000, times an average of 6.9 nights per guest, divided by 1.6 people per hotel room, reveals the need for 21,875 hotel rooms for a total of 150,938 room nights for the Convention. The number of hotel rooms needed by region was then estimated assuming block-bookings by the Democratic National Convention

⁶ Based on discussions between the BRA and Pinnacle Advisory Group, the researchers believe that a small recovery in the Boston hotel market will occur with room rates and occupancy that mirrors 2002 results. Therefore 2002 data was used for the normal or "baseline" room occupancy and rates.

Committee (DNCC) in each region and then filling Boston hotel rooms first, moving outward to suburban hotels.

Guest meal and beverage, retail, entertainment and other spending of \$124 per day, transportation spending of \$18 per day and hospitality spending of \$12 per day (included with hotel below), are all based on data of convention attendee spending gathered by the Greater Boston Convention and Visitors Bureau for 2003⁷. The hotel rate is the weighted average of all estimated hotel rates in effect during the Convention week. There are assumed to be approximately 13,000 rooms at pre-determined rates in Boston, Cambridge and some surrounding cities and towns reserved in blocks for Convention delegates, their families, and others by the DNCC. The rates charged for remaining available rooms will be subject to substantial market pricing pressure. It is estimated the most hotels in the metropolitan area will be near capacity at 95% occupancy during the Convention week due to both Convention business and normal business during the July busy season.

All of the spending for these variables was divided in to the respective industries where the funds will likely be spent and input into the model.

Estimated guest spending totals \$61.6 million, the bulk of which arises from spending on meals, retail, entertainment and other services. This was followed closely by hotel and hospitality spending, and then transportation spending.

Guest Spending

	Average Daily Spending	Total
Sales	\$ 124.00	\$ 29,946,000
Meals/Beverages	\$ 62.00	\$ 14,973,000
Retail	\$ 38.00	\$ 9,177,000
Entertainment	\$ 16.00	\$ 3,864,000
Other	\$ 8.00	\$ 1,932,000
Hotels and Hospitality	\$ 210.95	\$ 27,290,878
Transportation	\$ 18.00	\$ 4,347,000
Total	\$ 352.95	\$ 61,583,878

⁷ See Appendix A for GBCVB data details.

Host Committee Spending

Host Committee spending is the total of projected spending through the Boston 2004 Host Committee detailed in their agreement with DNCC, plus added security costs that have been determined since the Convention has been designated by Congress as a “national security event”. The major categories include Host Committee, Production, Convention Complex, City Insurance, Data Communications, Office Space, Security, Telecommunications, and Transportation.

The detailed figures in the agreement were then matched to appropriate industries where the funds will be spent and input to the model.

Host Committee Spending

Host Committee	\$	3,024,900
Production	\$	5,199,000
Convention Complex	\$	16,528,920
City Insurance Obligations	\$	3,950,000
Data Communications	\$	2,732,750
Hotel and Low-Cost Housing	\$	130,800
Office Space	\$	2,559,723
Security	\$	25,000,000
Telecommunications	\$	2,966,500
Transportation	\$	1,719,170
Host Committee Contingency	\$	100,000
DNC Committee Contingency	\$	588,880
Total		\$ 64,500,643

Estimated Host Committee direct spending totals \$64.5 million. The largest spending by industry⁸ occurs in Local Government for police and security services at \$25 million. Services receives the next largest amount of spending on Business and Professional Services with \$11.8 million. Services is followed by Construction with \$9.2 million, Finance, Insurance and Real Estate (FIRE) with \$7.2 million and Transportation

⁸ For more detailed industry spending see Appendix A.

with \$7.1 million. Host committee spending by industry wraps up with \$3.8 million in Retail spending and \$420,000 in Manufacturing with spending on printed materials.

Host Committee Spending

Government (Security/Police)	\$	25,000,000
Services	\$	11,822,600
Construction	\$	9,195,000
Finance Insurance & Real Estate	\$	7,199,723
Transportation & Communication & Utilities	\$	7,060,570
Retail	\$	3,802,750
Manufacturing	\$	420,000
		<hr/>
Total		\$ 64,500,643

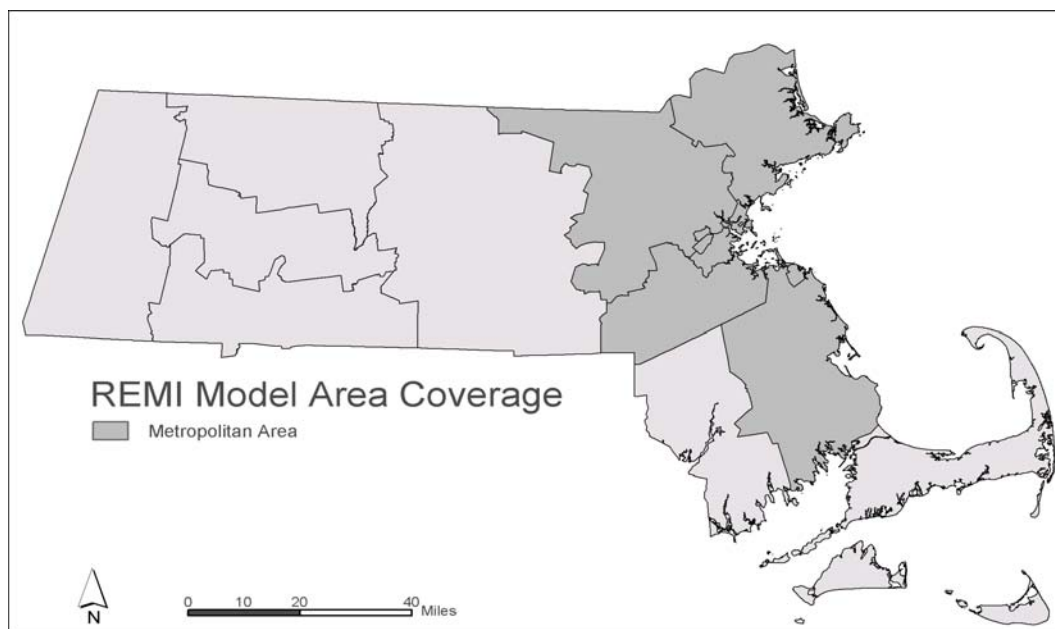
Indirect Value-Added and “Leakage”

Indirect value-added from Convention related direct spending adds an additional \$28.1 million to the metropolitan area economy. These funds are the difference between additional Gross Regional Product of \$154.2 million and \$126.1 million in direct spending estimated to be generated in association with the Convention. The reason that the value-added is just roughly one-sixth of the direct spending that generates it is that as direct spending moves through the metropolitan area economy – it also moves out of the metropolitan economy. This effect is sometimes referred to as “leakage”, and it is simply a statement of fact that much of the economic impact generated in a region will “leak” to other regions due mostly to the geographic location of inputs outside of the region being analyzed (think of imports from China as an extreme example) and labor mobility (seen in Suffolk County results), especially in a small geographic area as is under consideration here. In addition, taxes paid to governments and savings by individuals are both also considered leakage.

To accurately measure the value of leakage, the researchers would need to model the economic impact of the Convention on successively larger geographic regions that

surround the five-county metropolitan area such as Massachusetts and New England, and then subtract the additional Gross Regional Product of the metropolitan area from one of the larger area's additional Gross Regional Product. This difference could be labeled leakage from the metropolitan area economy. The researchers had neither the time nor resources to engage in the necessary further study of the issue in order to quantify its value for all regions that could be affected, but the effect can be seen in the difference between direct spending in Suffolk County and its resulting Gross Regional Product. Of the additional \$104.7 million in direct spending generated by the Convention in the county, only \$82.2 million remains while \$22.5 million “leaks” to the remaining four counties.

Leakage, in this study, has its most troubling effect when estimating the value of expected tax benefits to the larger governments. It has the effect of reducing the estimated value of additional tax revenue generated by the Convention to the Commonwealth of Massachusetts, as some of this leaked output is retained in the state economy as taxable sales and income, but outside of the metropolitan area economy



being studied here, and is therefore not measured due to the limitations of the model in use as mentioned earlier.

Fiscal (Tax) Impact⁹

While the REMI model output contains an estimate of jobs to be created by direct and indirect spending such as will occur with the Convention, it also assumes that this spending will occur over the course of a year. Drawing out spending such as this would likely generate jobs in an economy, as managers would seek to hire additional employees to match the incremental added demand on their businesses. But with a short duration of spending, even as large as is estimated to accompany the Convention, it is more likely that businesses will use existing employees on overtime shifts and possibly temporary help to fulfill their needs rather than invest in additional permanent employees.

Massachusetts Personal Income Taxes

Since it is assumed very few additional workers will actually be hired for Convention related work and that most will already have been gainfully employed, increased wages, especially in service industries, will arise from overtime work of existing labor or short-term temporary help. Since each of these groups consists of individuals who have very likely earned Massachusetts income in excess of the personal exemption allowed in Massachusetts law in tax year 2004 prior to this event, it is assumed that the effective income tax rate will be very close to the existing marginal Massachusetts personal income tax rate of 5.3%. To account for error in that some temporary employees will likely be hired that have not earned wages above the personal exemption for the tax year and to account for unused deductions and credits against taxable income that could now be fully utilized with the additional income, the researchers have chosen to use an effective personal income tax rate of 5.0% instead of

⁹ Boston additional tax, fine and fee revenues were calculated “outside” of model results. Commonwealth of Massachusetts tax revenues were calculated based on model outputs of personal income and consumption in the case of income and sales taxes, other excise taxes were taken directly from model output and tested with actual Massachusetts tax rates and against actual collections for reasonableness. See Appendix A for more detail.

the full value of the current marginal tax rate to make estimates of the personal income tax that will be generated by the Convention.

The 5.0% assumed rate is applied to all income projected to be generated, including capital gains and interest and dividend income. Since some of these latter types of income would be taxed at a higher rate than the marginal rate on wages and salaries, short-term capital gains for example, this estimate is more conservative by that additional factor, although very little additional non-wage and salary income is expected.

Gross personal income before taxes and adjustments, associated with convention spending, is estimated by the REMI model to be \$137.4 million. A taxable income proxy was developed by reducing Gross Personal Income by the value of some common reductions to wages and salaries of workers and a net loss due to worker residency outside of the metropolitan area of study. This in turn generates a taxable income base proxy of \$106.2 million and, subsequently, a total of \$5.3 million of personal income taxes for the Commonwealth.

Calculation of Personal and Taxable Income

	Suffolk County	Four County-Area	Total
Wage & Salary Disbursements	\$ 63,420,000	\$ 44,260,000	\$ 107,680,000
Proprietor's & Other Labor Income	16,670,000	10,800,000	27,470,000
Dividend, Interest & Rental Income	734,800	1,497,000	2,231,800
Gross Personal Income	80,824,800	56,557,000	137,381,800
Social Insurance Contributions	(4,441,000)	(3,253,000)	(7,694,000)
Transfer Payments	(1,569,000)	(5,999,000)	(7,568,000)
Net Residence Adjustment	(46,480,000)	30,550,000	(15,930,000)
Net Personal Income (Taxable Income Proxy)	\$ 28,334,800	\$ 77,855,000	\$ 106,189,800

Massachusetts Corporate Income and Business Excise Taxes

Corporate Income Tax may be slightly over-stated due to the inability of researchers to apply direct spending to specific tourism-related industries within the model's framework and the complexity of the Massachusetts corporate income tax

structure. The difference, however, likely has little substantial effect on the overall outcome of this analysis. An estimated effective rate of tax of 9.5% was used to generate the taxable income base from the REMI model output of estimated corporate income tax generated. Corporate income tax is projected to reach \$718,000 based on an estimated \$7.6 million in taxable income.

Other Business Excise taxes are expected to be generated in Insurance and Public Utilities due to spending through the Host Committee in each sector. Effective tax ratesⁱ of 1.92% on premiums of insurance companies and 6.5% on income of utilities were derived and applied to spending. Insurance excise tax is expected to total \$76,000 and Public Utility Excise, \$345,000.

Massachusetts Sales and Use Taxes

Due to the considerable expected consumption by convention guests on meals and beverages and taxable retail sales and services (Host Committee spending on tangible personal property is exempt from taxation as a 501-(C)(3) non-profit corporation), sales and use taxes associated with convention spending are expected to be robust. Overall, taxable spending is expected to amount to \$18.1 million and generate \$906,000 in sales and use tax revenue for the Commonwealth.

Taxable convention-related sales of food and beverages alone, is estimated to total \$14.4 million, or approximately \$60.00 per day, per person in attendance. At the operative 5.0% tax rate, this amounts to \$721,000 in meals taxes generated for the Commonwealth.

Taxable sales and use of tangible personal property is expected to amount to \$3.3 million, or about \$13.66 per guest each day, and generate \$164,000 in sales and use taxes. Telecommunication Services sales and use tax is estimated to be \$21,000 on taxable sales of \$411,000, or approximately \$2.72 per convention-related hotel room per day.

Most taxable spending on motor vehicles is expected to occur within Host Committee spending or among government agencies, and therefore will be tax exempt.

Massachusetts and Boston Excise Taxes

Excise taxes from hotel rooms, jet fuel, tobacco, motor fuels, and alcoholic beverages will all be affected by such a large convention coming to Boston. Excise taxes are direct taxes on very specific products and activities. The overall design of excise taxes is to help governments cope with activities that will, when increased, raise the baseline demand of government services. Conventions are one example of that type of activity.

The Room Occupancy Excise tax estimates are net of what would be normal July activity in the Boston, Cambridge and Suburban hotel markets. Estimated taxable revenues are adjusted by subtracting the value of normal business that would have occurred without the Convention.

Furthermore, a “crowding out” effect in the Boston market will serve to substantially increase suburban occupancy rates to the maximum (assumed here to be 95%) increasing room rates as a result, and therefore, tax revenue. It is estimated that approximately 11,500 rooms in Boston and Cambridge associated with normal business will be replaced with Convention business and that 9,026 of those rooms will be absorbed by the suburban hotel market, yielding a net loss of 2,474 hotel room occupancies within the model coverage area if all business were to be accommodated. This effect yields little opportunity cost to Commonwealth room occupancy revenues as there is nearly enough total room supply to meet the total of normal and Convention demand, but it does serve to limit additional Boston local room occupancy tax revenues while increasing revenues to suburban cities and towns. The suburban hotel market routinely absorbs Boston market “overflow” hotel guests in this fashion.

Hotel Room "Crowding-out" & "Re-shuffling" Effects

	Total Rooms as of July 2004	Normal Occupancy	Normal Rooms Occupied	Remaining Rooms	Needed Convention Rooms	Displaced Normal Business	"Re-Shuffled" Market @ 95% Occupancy
Boston	16,240	80%	12,992	3,248	15,428	(12,992)	15,428
Cambridge	2,535	80%	2,028	507	2,408	(2,028)	2,408
Metro	26,998	72%	19,439	7,559	4,039	3,520	25,648
Total	45,773		34,459	11,314	21,875	(11,500)	43,484
Net Addition to Room Occupancy							9,026

In the case of revenues, this effect translates into very strong price pressure on the remaining room rates after early Convention related booking takes place. A survey of popular travel websites indicates that Boston hotels that still have vacancies for the Convention week are charging an average of 50.7% more for those rooms than the week after the Convention and Suburban Boston hotels are charging 45.8% more as well. This added price pressure will serve to increase hotel revenues by more than 75% during the Convention week over what would be earned during a normal July week.

Additional Room Occupancy excise tax to the Commonwealth will total \$1.7 million and \$360,000 to Boston based on these assumptions.

Other additional revenues from excises, such as motor fuel, tobacco and alcoholic beverages will total \$592,000 for the Commonwealth and jet fuel for Boston will total \$487,000.

Net Hotel Activity and Revenue by Market

	July Occupancy	July Room Rate	Total Rooms	Occupied Rooms	Vacant Rooms	Revenue for 6.9 Days
<i>Baseline July Hotel Market Activity</i>						
Boston	80%	\$ 160.00	16,240	12,992	3,248	\$ 14,343,168
Cambridge	80%	\$ 160.00	2,535	2,028	507	\$ 2,238,912
Metro	72%	\$ 117.00	26,998	19,439	7,559	\$ 15,692,749
			45,773	34,459	11,314	\$ 32,274,829
<i>Convention Delegates - Discounted Block Rooms</i>						
Boston	100%	\$ 206.04	9,771	9,771	-	\$ 13,891,196
Cambridge	100%	\$ 199.79	1,526	1,526	-	\$ 2,103,669
Metro	100%	\$ 137.86	1,752	1,752	-	\$ 1,666,562
			13,049	13,049	-	\$ 17,661,427
<i>Other Business/Overflow Convention Business</i>						
Boston	95%	\$ 241.12	6,469	5,657	812	\$ 9,411,709
Cambridge	95%	\$ 241.12	1,009	882	127	\$ 1,467,824
Metro	95%	\$ 170.59	25,246	23,896	1,350	\$ 28,126,747
			32,724	30,435	2,289	\$ 39,006,280
<i>Total Convention Week Business</i>						
Boston			16,240	15,428		\$ 23,302,905
Cambridge			2,535	2,408		\$ 3,571,493
Metro			26,998	25,648		\$ 29,793,309
						\$ 56,667,707
Increase from Baseline						75.6%

Massachusetts and Boston Total Taxes

Overall, it is expected that the Commonwealth, within the metropolitan area economy, will receive a total of at least \$10.7 million in additional Income, Sales and Use, and Excise taxes in addition to fees for licenses and permits from Convention-driven activity spending. This compares to a Boston total of an additional \$2.0 million in excise taxes, fines and fees for licenses and permits. These amounts equal a ratio of additional Commonwealth revenue to City of Boston revenue of approximately 5.5 to 1.0. In other words, for every \$1 the City collects in taxes and fees due to the Convention, the State collects \$5.50 in taxes and fees.

It is expected, although not quantified in this study, that the Commonwealth will receive additional tax revenue from spending and sales leakage outside of the metropolitan area economy, but still within the state. As stated earlier, the model in use only measures the five county-area and is not equipped to further analyze the additional impact in the remaining regions of the state.

Conclusion

The 2004 Democratic National Convention to be held in Boston July 26 to July 29, 2004, will attract more than 35,000 delegates, media and staff to Boston and surrounding cities and towns. They will stay an average of 6.9 nights and occupy approximately 21,875 hotel rooms at an average rate of \$211 (including hospitality suites). They will spend an average of \$124 each per day, on meals and beverages, retail purchases, entertainment, and other services along with about \$18 each per day for transportation to and from events around the area.

Overall, value-added to the Gross Regional Product of the metropolitan area economy will total \$154.2 million. As each dollar directly spent in association with the Convention is re-spent repeatedly, it will produce an additional \$28.1 million in value added to direct spending of \$126.1 million. Suffolk County will suffer from leakage of added value as it moves out of the county in into the surrounding four-county area through the wages of the large non-resident labor pool of Boston employment.

\$13.3 million in additional tax revenue will accrue to the Commonwealth, the City of Boston and surrounding cities and towns. The Commonwealth will collect 80% of this revenue, Boston, 15%, and the other cities and towns the remaining 5%. The Commonwealth's 80%, or \$10.7 million translates into 5.5 times Boston's 15% or \$2 million in additional tax collections.

The Convention will produce a sizeable economic and fiscal benefit to the Commonwealth, Metropolitan, and Boston economies and their respective tax collections.
